

Technical Data

■ Laser measurement system

Ambiguity interval:	79 m
Min. range:	1.0 m
Resolution Range:	0.1 mm
Data acquisition rate:	≈ 500 000 Pixel/sec
Linearity error up to 50m ¹ :	≈ 1 mm
Range noise at 10 m¹ 2:	
- Reflectivity 10% (black):	1.2 mm rms
- Reflectivity 20% (dark grey):	0.7 mm rms
- Reflectivity 100% (white):	0.4 mm rms
Range noise at 25 m¹ 2:	
- Reflectivity 10% (black):	3.0 mm rms
- Reflectivity 20% (dark grey):	2.0 mm rms
- Reflectivity 100% (white):	1.0 mm rms
Range noise at 50 m¹ 2:	
- Reflectivity 10% (black):	7.5 mm rms
- Reflectivity 20% (dark grey):	4.0 mm rms
- Reflectivity 100% (white):	2.5 mm rms
Range drift over temp. (0°C - 40°C):	negligible due to internal reference

■ Optical transceiver

Laser:	visible
Beam divergence:	0.22 mrad
Beam diameter at 1 m distance:	3 mm circular
Laser safety class:	3R (ISO EN 60825-1)

■ Deflection unit

System vertical/horizontal:	Rotating mirror/device
Field of view vertical/horizontal:	310°/360°
Resolution vertical/horizontal:	0.0018°/0.0018°
Accuracy vertical ¹ /horizontal ¹ :	0.007° rms/0.007° rms
Max. scanning speed vertical:	≈ 50 rps
Typ. scanning speed vertical ² :	25 rps

■ Resolution

Resolutions:	Pixel/360° (vertical, horizontal)	Scanning time
- „preview“:	1 250	25 sec
- „middle“:	5 000	1 min 40 sec
- „high“:	10 000	3 min 22 sec
- „super high“:	20 000	6 min 44 sec
- „ultra high“:	40 000	26 min 40 sec
- Max resolution for selections:	100 000	-

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■ Miscellaneous

Tilt measurement:	
- Resolution:	1/1 000°
- Accuracy:	1/500°
Data storage:	Internal HDD
Data interface:	Ethernet/USB 2.0
Communication interface:	Ethernet/Bluetooth
Integrated operation panel:	
- Keypad:	6 Buttons
- Display:	4 Lines
Power supply:	
- Input voltage:	24V DC (scanner) 90 - 260V AC (power unit)
Power consumption:	50 W
Battery life time:	
- Changeable battery pack:	1.5 h
- External battery pack:	4 h
Ambient conditions:	
- Calibrated temperature:	0°C - 40°C
- Storage temperature:	-20°C - 40°C
- Humidity:	non-condensing
- Target reflectivity:	no retro-reflectors all conditions from darkness to daylight
- Illumination:	

■ Dimensions and weights

Scanner (w x d x h) in mm/weight:	286 x 190 x 372/14 kg
Bottom of scanner to horizontal axis:	242 mm
Tripod:	
- Height/weight:	approx. 800 - 1 400 mm/9 kg
- Diameter:	approx. 1 200 mm

¹ Detailed explanation on demand – please contact imager5006@zf-laser.com

² Data acquisition rate: 127 000 pxl/sec.

Contact

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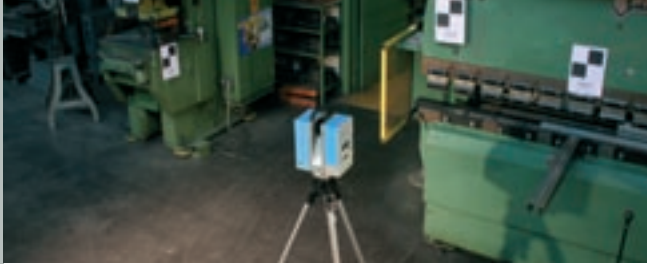


The new way of scanning –
high-accuracy, fast, reliable and
flexible

IMAGER 5006



Digital factory



The complete 3D survey of plants and production facilities is an essential base for plant construction.

- As-Built Documentation – Three-dimensional data acquisition of the actual state
- Virtual plant – simulation of production flow and interference check
- Variance comparison – fast detection of constructional irregularities

Forensic



An entire and fast documentation of crime scenes is necessary in the field of forensics.

- 3D-documentation of crime and securing evidences
- 3D-animation of crime scenes
- Fast creation of overviews and drawings
- Appointing the size of a suspect via point clouds and observation photos
- Reconstruction of bullet trajectories in 3D
- Checking the plausibility of testimonies

Advantages

The IMAGER 5006 offers the user numerous advantages, that increases the productivity and reduces the costs.

- "Stand alone" concept for easiest handling and fast assembling
- Ambiguity range up to 79 meters
- Highest accuracy when surveying quickly
- Very little range noise in the whole point cloud
- Light-weight and compact design
- Practical carrying handle
- Electronic inclination sensor
- The scanner is ready for Wild/Leica tribrach with any Survey Industry Standard tripod
- Bluetooth-, Ethernet- and USB-interfaces
- Unique handling concept
 - Operation directly via keyboard/display
 - Wireless operation via PDA (Bluetooth)
 - Operation via notebook/network link (Ethernet)
- Operation and software update via Internet
- Colour options: it is possible to connect a Single Lenses Reflex (SLR) Camera directly to the Scanner



Architecture & protection of historical buildings



A complete survey, from fine structures to complete buildings, is very important in the architecture sector.

- Detailed 3D survey of buildings
- Production of floor plans, slices, front views
- Creation of full-scale orthophotos
- Virtual reality, e.g. for digital presentations
- Damage detection
- Statics

Documentation of traffic accidents & infrastructure



- Survey of:
 - Railroads
 - Tunnels
 - Streets
 - Bridges
- Fast 3D environmental survey from moving platforms by dynamic laser scanning in the profiler mode in combination with GPS, ETC